

REMARKS

Upon entry of the present amendment the Claims under consideration are Claims 2-11, 13-27, and 29-38. Claim 2 has been amended hereby in an attempt to more clearly state the crimped nature of the fibers subjected to the recited heat setting treatment. Independent Claims 2, 7 and 21 have been amended to make clear that the heat setting of the lofty web of crimped homofilament creates a web of sufficient structural integrity to withstand high-speed web transfer as recited at page 19, lines 7+ of the specification. Claims 39-41 have been added as dependent from Independent Claims 2, 7 and 21, respectively, to specify that the first and second layers are further bonded to create a laminate of sufficient structural integrity to withstand high-speed web transfer as originally set forth in Claims 2, 7 and 21. Claims 20 and 31 have been amended to change their dependencies consistent with amended Claims 7 and 21. No new matter has been added. The Detailed Action of 15 October 2003 will now be addressed with reference to the headings and any paragraph numbers therein.

Claim Rejections 35 USC §103

Per paragraph 2 of the Detailed Action, Claims 2-11, 13-27 and 29-38 stand as obvious over Arnold et al. (U.S. 5,707,468; hereinafter “Arnold”) in view of Kane et al. (U.S. 4,359,445; hereinafter “Kane”).

It is contended by the Detailed Action that a person having ordinary skill in the art would “form the fabric of Arnold so that it comprised layers that comprised the crimped homopolymeric fibers of Kane et al.” Applicants respectfully traverse the basis of this rejection.

It is respectfully submitted that Arnold and Kane are not properly combinable *per se* because the references lack any suggestion for such a combination. Such a combination would further lack any suggestion of success to a person having ordinary skill in the art.

Arnold teaches a brief application of high heat flow through a hot air knife (HAK) to quickly melt bond ¹ each of its spunbond layers. The HAK process

¹ At the top of its page 4, the Detailed Action, seeking to negate Applicants’ previous arguments that Arnold does not suggest the claimed method, denies that Arnold teaches meltbonding of its web because Arnold recites that the HAK treatment is “insufficient to melt the fiber.” The melting of a fiber warned against by Arnold would be understood by a person having ordinary skill in the art to refer to a

taught by Arnold is not taught as suitable for crimping the latently crimped fibers of Kane. Arnold teaches a HAK application of heat to meltbond its webs at 200-550 °F (col. 5, line 28) (or 320 °F in the Examples) at a flow rate of 1000 to 10000 fpm at an exposure time of less than a tenth of a second. Kane teaches that its crimps are achieved through the application of a lower heat by an updraft oven at 230 °F with an air velocity of 200 fpm for 5 seconds (col. 6, line 36).

Conversely, because Kane teaches the use of a foraminous belt 70 (col. 5, line 17) to carry its fibers, such a foraminous belt arrangement would be assumed (by the person of skill in the art) to be necessary to allow the heated updraft air to flow through the web and achieve crimping. Kane makes no suggestion that a nonwoven substrate layer according to Arnold would be appropriate for carrying the latent crimp fibers through an updraft oven. Indeed, an additional nonwoven substrate (as in Arnold) on the foraminous belt and underneath Kane's latently crimped fibers would present a barrier to the heated updraft air flow crimping system of Kane.

Thus, as noted in footnote 1, the temperatures of Kane and Arnold are selected to have distinctly different effects. As discussed above, the mechanisms of applying said heat are also distinctly different.

In order for a combination of references to be suggested to the person having ordinary skill in the art, some practical advantage to the combination must be presented from the references or the art in order to lead to an expectation of success in the combination (see MPEP §2143). Per the above discussion, no practical advantage can be seen to result from the combination of Arnold and Kane due to their disparate heat sources. Therefore, it is respectfully requested that the present rejections be withdrawn.

Applicants further respectfully request withdrawal of the finality of the last action and reconsideration and withdrawal of all outstanding rejections based on the following remarks.

Per the remarks at page 3 of the Detailed Action, it is believed that the

melting, i.e., liquid phase, of the fibers which would induce structural changes to the web. Arnold clearly states at col. 5, line 28, that the HAK is used to soften the fibers to bond them together into a web, i.e., "meltbond" the web. Therefore the Detailed Action is in error with respect to the teachings of Arnold concerning "meltbonding." Conversely, Kane at col. 5, lines 25 - 29 teaches that its heating

Office does not contest that the mechanism of web formation for Kane is different from that of the present invention. Instead, it is apparently the contention of the Detailed Action that the present claims (especially Claim 2) do not adequately define the temporal differences in the processes of the present invention and Kane, namely that the crimped fibers of the present invention are heat treated to set the crimps and the structural integrity of the web, while the latently crimped fibers of Kane are heat treated to induce crimp into latently crimped fibers.

The Detailed Action contends that the present claims do not recite that the fibers are “previously crimped” prior to the heat operation setting the crimps. In support the Detailed Action cites only one limitation of the present claims (Claim 2), i.e. “creating a lofty second layer having crimped homofilament fiber.” However, the recited limitation of “creating a lofty second layer having crimped homofilament fiber” must be read in conjunction with the immediately following limitation, i.e.,

“traversing the second layer [necessarily having crimps as recited in the previous limitation] through a flow of heated air at a temperature, flow rate, and traversal rate sufficient to heat set the crimps of the fibers without substantial melt bonding or relaxation of the fibers;”

or as now amended:

“traversing the lofty second layer having crimped homofilament fibers through a flow of heated air at a temperature, flow rate, and traversal rate sufficient to heat set the crimps of the fibers without substantial melt bonding or relaxation of the fibers.”

Therefore, it is believed that the Detailed Action is in error that the Claims do not recite applying the heat setting operation to fibers with already (previously) formed crimps. Therefore, the finality of the last Office Action is premature and it is respectfully requested that the finality of the last Office Action be withdrawn until such time as the plain meaning of the claims is made clear for the record.

Beginning at page 3 of the Detailed Action, the Detailed Action has further responded to the Applicants’ previous arguments against combinability of Arnold and Kane as set forth in Amendment A. Applicants specifically respond to these remarks of the Final Office Action as follows:

At page 4, second paragraph, the Detailed Action has sought to negate the

temperature should be below the softening temperature of the fibers.

Applicants' previous arguments with respect to the impropriety of using a nonwoven web as in Arnold as a carrier sheet of the latent-crimped fibers of Kane. The Detailed Action states that: "Arnold teaches employing a foraminous belt to hold the deposited fibers." However, as noted above, in the combination suggested by the Detailed Action, the latently crimped fibers of Kane would not be applied to a foraminous belt, they would be applied to the first nonwoven web of Arnold. The layer of the latently crimped fibers of Kane must then be heat treated to activate the latent crimp.

The references suggest two methods of heat application: 1) the HAK treatment of Arnold (which is a meltbonding technique not taught as sufficient to activate the latent crimp), or 2) the updraft oven teachings of Kane (which is impeded by the first nonwoven web of Arnold interposed between the foraminous belt and the layer of latently crimped fibers). Therefore, the Applicants again submit that the finality of the last Office Action is premature and it is respectfully requested that the finality of the last Office Action be withdrawn until such time as the plain meaning of the claims is evidenced to be understood in the record.

For all the foregoing reasons, Applicants request that the finality of the last action be withdrawn, and that the Claims be recognized as allowable over the art of record.

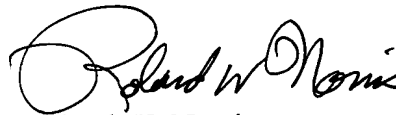
A telephonic interview was conducted on 25 November 2003 between Examiner Cole and the undersigned attorney. The Arnold and Kane references were discussed with respect to the issues of: 1) prior crimping of the fibers before heat setting according to Kane versus the recitation of the present Claims, 2) the meaning of "meltbonding" versus the teachings of Arnold, and 3) the noncombinability of the Arnold and Kane teachings with respect to their incompatible methods of heat application to a combined laminate of Arnold fibers underneath a layer of Kane fibers. The Examiner stated that she would consider more closely the nature of discussion point 3) if Applicants were to submit the discussion for the record. No agreement was reached as to the allowability of any claims. Applicants' undersigned attorney would like to thank the Examiner for the courtesy shown him during their interview.

The Examiner is invited to call Applicants' undersigned attorney should the Examiner feel that any issues remain after entry of the present amendment.

No fees are believed to be owed for the present amendment as the total number of Claims remains at 38. The Commissioner is hereby authorized to charge any deficiency or to credit any overpayment to Deposit Account No. 19-3550.

Favorable consideration is requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Roland W. Norris". The signature is fluid and cursive, with the first name "Roland" being the most prominent part.

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